

Scientific Review Group Terms of Reference

1) Background

As required by section 117(d) of the Marine Mammal Protection Act (MMPA)(16 U.S.C. §1386(d)), the Secretary of Commerce established three independent regional Scientific Review Groups (SRGs) to advise the Secretary (authority delegated to the National Marine Fisheries Service (NMFS)) on a range of marine mammal science and management issues. The Alaska SRG advises on marine mammals that occur in waters off Alaska that are under the jurisdiction of the United States. The Pacific SRG advises on marine mammals that occur in waters off the Pacific coast, Hawaiian Islands, and the U.S. Territories in the Central and Western Pacific that are under the jurisdiction of the United States. The Atlantic SRG advises on marine mammals that occur in waters off the Atlantic coast, Gulf of Mexico, and U.S. Territories in the Caribbean that are under the jurisdiction of the United States.

The three SRGs were established in consultation with the Secretary of the Interior (authority delegated to the U.S. Fish and Wildlife Service; FWS) the Marine Mammal Commission (MMC), Governors of affected coastal States, regional fishery and wildlife management authorities, Alaska Native organizations and Indian tribes, and environmental and fishery groups. As specified under the MMPA, the SRGs are not subject to the Federal Advisory Committee Act (FACA; 5 App U.S.C). These Terms of Reference apply to all three SRGs and each SRG Member individually. Therefore, all references to SRG components (e.g., SRG, SRG Chair, SRG Members) apply to all SRGs.

2) Purpose and Scope

Per Section 117(d)(1) of the MMPA, the SRGs shall advise the Secretary on:

- (A) Population estimates and the population status and trends of marine mammal stocks;
- (B) Uncertainties and research needed regarding stock separation, abundance, or trends, and factors affecting the distribution, size, or productivity of the stock;
- (C) Uncertainties and research needed regarding the species, number, ages, gender, and reproductive status of marine mammals;
- (D) Research needed to identify modifications in fishing gear and practices likely to reduce the incidental mortality and serious injury of marine mammals in commercial fishing operations;
- (E) The actual, expected, or potential impacts of habitat destruction, including marine pollution and natural environmental change, on specific marine mammal species or stocks, and for strategic stocks, appropriate conservation or management measures to alleviate any such impacts; and
- (F) Any other issue which the Secretary or the groups consider appropriate. In addition, the SRGs review draft marine mammal stock assessment reports (SARs) developed or revised by NMFS and the FWS pursuant to section 117(d) of the MMPA for marine

mammal stocks within the SRG's region. The SRG is expected to provide thorough, expert technical review of the SARs following the guidelines outlined in Appendix A.

Additionally, the SRGs may choose to review other information relevant to the areas outlined in section 117(d) of the MMPA. In the case where the SRG chooses to review information or issues not otherwise requested by NMFS or the FWS, the SRG Chair will notify NMFS and/or the FWS via the SRG Liaison.

3) Roles and Responsibilities

a) NMFS and FWS

NMFS and the FWS are responsible for drafting and revising SARs for marine mammal species over which they have conservation and management authority. Under the MMPA, NMFS has responsibility for all marine mammal species that occur within waters under the jurisdiction of the United States with the exception of polar bears, walruses, sea and marine otters, dugongs, and manatees, which are under the authority of the FWS.

NMFS provides technical, administrative, financial, and coordination support for the SRGs. The NMFS Alaska Fisheries Science Center is responsible for convening and supporting the Alaska SRG. The NMFS Pacific Islands Fisheries Science Center and Southwest Fisheries Science Center are responsible for convening and supporting the Pacific SRG. The NMFS Northeast Fisheries Science Center is responsible for convening and supporting the Atlantic SRG. The NMFS Alaska Fisheries Science Center, Southeast Fisheries Science Center and Pacific Islands Fisheries Science Center may provide additional staff support to the respective SRGs that review stocks that occur in their waters. FWS representatives attend convened meetings of the SRG, as appropriate.

The NMFS Office of Science and Technology provides coordination and technical support via the participation of the National SRG Coordinator and the National SAR Coordinator. The National SRG Coordinator and the National SAR Coordinator are not Members of any SRG but provide the SRGs with direction regarding consistent application of the Guidelines for Assessing Marine Mammal Stocks and any technical or other matters from SRG reviews with potential for national precedent or implication. The National SRG Coordinator and the National SAR Coordinator may be asked by one or more SRG Chairs to provide scientific or technical support to the SRG at or between meetings. The Director of the NMFS Office of Science and Technology serves as a conduit for national coordination and communication of technical and/or other matters among the SRGs, as well as with the FWS and the MMC, as needed.

NMFS is committed to ensuring that SRGs have both the expertise and logistics needed to provide meaningful reviews of the SARs or any other information under review. If funds are limited or other emergencies arise, the SRG Liaison will alert the Chair in advance of the meeting and may make arrangements to have SRG Members participate in the review remotely (e.g., via email, teleconference, videoconference, Webex).

b) NMFS Liaison to the SRG

Each of the assigned NMFS Science Centers will provide at least one staff member to serve as Liaison to its region's SRG. The SRG Liaison is not a Member of the SRG but serves as a conduit for communication between NMFS, FWS, and the SRG, and facilitates collaboration with NMFS Headquarters, Regional offices, and Science Center staff on their respective SRG matters.

Liaison duties include assisting the SRG Chair in the development of meeting agendas, timely drafting and delivery of meeting minutes to the SRG, the handling of meeting logistics, the development and delivery of the draft SARs and other NMFS-generated information to the SRG, serving, appointing, or arranging rapporteurs for the meetings, and coordinating changes in membership, among other things at the request of the Chair. The SRG Liaison also provides scientific or technical support to the SRG at and between meetings.

c) Members

SRG Members provide expert reviews of draft SARs and other information related to the matters identified in section 117(d) of the MMPA. SRG Members collectively serve as independent advisors to NMFS and FWS and provide their expert review and recommendations through participation in the SRG. However, the content of the final SARs and other documents are issued under the authority of the agencies, and the agencies make final decisions. Prior to each meeting, SRG Members review draft SARs and other relevant documents. During the meeting, Members will discuss each of the draft SARs and other items for their review and will determine whether the assessments reviewed by their SRG have been completed successfully and are based on the best available scientific information. The SRG will make recommendations in writing to NMFS and FWS, as appropriate, and SRG recommendations and agency responses will be publicly available. NMFS will consider the recommendations of the SRG in making its final decisions, and will provide the SRG with an explanation when it significantly deviates from SRG recommendations. SRG reviews are matters of public record and conducted consistent with the terms provided in Appendix A.

d) SRG Chair

The SRG shall appoint a Chair from among the SRG Members to provide oversight and coordination for its activities. The SRG Chair works closely with the SRG Liaison between meetings to develop meeting agendas, make meeting arrangements, identify materials for distribution and review by the SRG, identify gaps in the expertise of the SRG and suggest potential SRG members, and identify other matters related to the review of marine mammal stocks within their geographic scope. The SRG Chair may assign review leaders for each SAR or other related documents being reviewed. Additionally, the Chair prepares, signs, and formally transmits recommendations from the SRG to NMFS and/or FWS.

The Chair facilitates full and open discussion and consideration of scientific and technical viewpoints. A list of current SRG Chairs, Members, Liaisons, and the National SRG and

SAR Coordinator is available at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/scientific-review-groups>

e) Invited Experts

Experts may be invited by the SRG Chair, in consultation with the SRG membership, to participate in SRG activities on an *ad hoc* basis to supplement the core expertise of the SRG on a particular topic. Invited experts may be asked to present information to the SRG and to respond to SRG Members' questions, but they are not Members of the SRG nor do they advise the agencies in this forum. In addition to agency representatives, the Chair may invite specific NMFS and FWS personnel to attend meetings as experts. The Chair will consult with the SRG Liaison about inviting experts in advance of the meeting regarding any NMFS budget limitations that might restrict the expert's participation. Invited experts should refrain from discussing any preliminary findings of the SRG outside of the SRG proceedings.

f) Meeting Observers

Pursuant to section 117(d)(2) of the MMPA, the SRG is exempt from FACA rules. Members of the public and scientific community may attend SRG meetings as Observers. Observers may participate in SRG discussions when invited by the Chair. A summary of Observer comments will be captured in the meeting minutes.

4) Membership and Terms of Service

a) Composition of the SRGs

The SRGs consist of individuals with expertise in marine mammal biology and ecology, population dynamics and modeling, commercial fishing technology and practices, and stocks taken under section 101(b) of the MMPA. NMFS shall, to the maximum extent practicable, attempt to achieve a balanced representation of viewpoints (i.e., scientific and technical viewpoints) among the individuals on each SRG. Pursuant to section 117(d)(4) of the MMPA, the Secretary may appoint or reappoint individuals to the SRGs as needed.

b) Nomination of New Members

NMFS, in consultation with the SRG and FWS, will annually review the expertise available on the SRG and identify gaps in expertise needed to provide advice pursuant to section 117(d) of the MMPA. NMFS will seek nominations for potential new members through a notice in the *Federal Register* and on the NMFS website. NMFS may also consult with the Marine Mammal Commission, the Governors of affected adjacent coastal States, regional fishery and wildlife management authorities, Alaska Native organizations and Indian tribes, and environmental and fishery groups in identifying suitable potential new members to fill a vacancy or to provide needed expertise. The SRG may recommend potential new SRG Members to NMFS, via the Chair and SRG Liaison.

Nominations for new Members will be accompanied by the individual's curriculum vitae and detailed information regarding (a) how the recommended person meets the minimum selection criteria for SRG Members (see Appendix B), (b) how the recommended person would augment existing expertise or bring needed expertise to the group, and (c) how the recommended person's participation on the SRG would contribute to achieving a balanced representation of viewpoints.

The nominations will be submitted by the relevant Director of the NMFS Fisheries Science Center to the Director of the NMFS Office of Science and Technology, providing a copy to the SRG Chair, the relevant NMFS Regional Administrator, the Director of the NMFS Office of Protected Resources, the SRG Liaison, and the National SRG Coordinator no less than three months prior to the next SRG meeting.

The Director of the NMFS Office of Science and Technology will review the nominations relative to the minimum criteria found in Appendix B. If the nominee's expertise addresses explicitly a need identified by the FWS and/or is related to a species under FWS authority, NMFS will consult with the FWS in making its final decision. The Director of the NMFS Office of Science and Technology, in consultation with the Director of the relevant NMFS Fisheries Science Center, the Office of Protected Resources, the relevant NMFS Regional Administrator, the SRG Liaison, and the National SRG Coordinator, will forward the recommendations to the Assistant Administrator for Fisheries, who appoints, re-appoints, or removes SRG Members. A current list of SRG members and Chairs can be found at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/scientific-review-groups>

c) Appointment and Length of Service

SRG Chair

The SRG Chair is chosen by a majority vote of SRG Members. The term of service for the Chair is three consecutive years. The Chair may be re-elected for up to two additional consecutive terms. If the Chair steps down before the end of a term, the Members will elect a new Chair to finish the term. This will not count towards the newly appointed Chair's first term. Upon the election of the Chair, the NMFS Liaison will notify the Director of the relevant NMFS Fisheries Science Center, who will notify the Directors of the NMFS Office of Science and Technology and NMFS Office of Protected Resources, and the relevant NMFS Regional Administrators. In addition, the NMFS Liaison will notify the appropriate FWS Regional Director in writing, providing a copy to the FWS National Marine Mammal Coordinator.

An SRG, in consultation with the SRG Liaison, may choose to elect a Vice Chair to provide support to the Chair, and to carry out other tasks the Chair determines essential to the functioning of the SRG. In the event the Chair is unable to perform his/her duties, the Vice Chair may assume this position for one SRG meeting, including preparation for that meeting.

SRG Members

SRG Members are appointed by the Assistant Administrator for Fisheries, in consultation with the Director of the relevant Fisheries Science Center, the relevant Regional Administrator, the Director of the NMFS Office of Science and Technology, the Director of the NMFS Office of Protected Resources, and the FWS.

Terms of Service

The term of service for SRG Members is three years and Members may serve up to three consecutive terms. After serving three consecutive terms and following a one-year hiatus from membership, a Member may be re-nominated for membership.

d) Code of Conduct for Members

SRG Members must comply with section 208 of title 18 of the United States Code and any related requirements of the Ethics Law and Programs Division at the Department of Commerce's Office of General Counsel.¹ Additionally, SRG Members should adhere to the following guidelines to avoid conflict of interest and other ethical problems:

- 1) Members attend meetings and undertake activities as independent persons providing expertise in their subject areas. Members are not appointed as representatives of professional organizations or particular stakeholder groups, including government entities, and are not permitted to represent or advocate for those organizations, groups, or entities during SRG meetings, discussions, and deliberations.
- 2) In the event that a matter has a very direct and predictable effect on a Member's personal financial interests, those of a client, or those of a company by which they are employed, Members will recuse themselves from advising or voting on that matter. Should there be the potential for conflict of interest, Members will inform the SRG in a public statement of the potential conflict. This does not mean that Members should not share their knowledge during the SRG's general discussions, particularly on a topic in which they are expert.
- 3) Members will not solicit business for themselves or their firms or seek an economic advantage based on their position on the SRG.
- 4) Members are asked to hold any unpublished information obtained as a result of their service on or to the SRG in confidence and ensure that they do not use it for anything other than for official SRG purposes until published.
- 5) Members will not use the resources available to the SRG for the purposes of assisting a political or advocacy campaign or for any campaign business.

¹ Including Special Government Employees provisions: <https://www.oge.gov/Web/OGE.nsf/>

e) Resignation or Termination of Membership

An SRG Member may resign at any time by informing the SRG Chair in writing. If the Chair resigns before the end of a term, he or she will inform the SRG liaison so the members may vote for a new chair. NMFS, FWS, or the SRG (by a majority vote of the SRG) determines that a Member's expertise is not critical to the work of the SRG and/or that the Member is no longer providing needed expertise, the relevant Director of the NMFS Fisheries Science Center will recommend to the Assistant Administrator for Fisheries that Member be removed from the SRG.

Any recommendation for the removal of SRG Members must be accompanied by the rationale for the recommendation consistent with these Terms of Reference. Should the Assistant Administrator for Fisheries decide to remove a Member from the SRG, the Director of the NMFS Office of Science and Technology will notify the Member in writing that his/her participation in the SRG is no longer required and will provide rationale for the decision, with a copy to the relevant Director of the NMFS Fisheries Science Center, the relevant NMFS Regional Administrator, the SRG Liaison, the National SRG Coordinator, the appropriate FWS Regional Director, and the FWS National Marine Mammal Coordinator no less than three months prior to the next SRG meeting. NMFS may remove a Member based on any of the following grounds if that Member:

- 1) Is found to have violated any marine mammal laws or regulations promulgated pursuant to the MMPA; the Endangered Species Act; the Magnuson-Fishery Conservation and Management Act; or another environmental law for which NMFS, FWS, or another federal agency has jurisdictional responsibility;
- 2) Has a change to personal circumstances that significantly modifies that Member's qualifications for serving as a Member of the SRG;
- 3) Misses two full consecutive annual meetings without reasonable justification;
- 4) Disrupts SRG meetings on more than one occasion; or
- 5) Violates any of the SRG Terms of Reference, including the Code of Conduct.

The appointment(s) and/or removal of SRG Members should avoid, if possible, changing the composition of the SRG by more than one third of its Members in one calendar year.

5) Meeting Arrangements and Operating Rules

a) Meetings

NMFS will endeavor to support at least one in-person meeting for each SRG annually. The timing, location, duration, and draft list of topics for each SRG meeting will be developed by the SRG Chair and the SRG Liaison, in consultation with the FWS, as appropriate. In some cases, budget constraints, public health concerns, or other extenuating circumstances may require convening some or all of the meeting participants remotely rather than in person.

SRG Members are expected to attend each meeting in person. However, accommodations can be made for attendance by telephone, webinar, or other virtual means where necessary. The relevant NMFS Science Center, via the NMFS Liaison, will provide meeting materials electronically (e.g., agenda, draft SARs, and documents necessary to support the agenda) at least three weeks in advance of each meeting. SRG Members who know that they will be absent or late, or have to leave the meeting early, must inform the SRG Chair and the SRG Liaison and may provide written input for inclusion in the meeting record as appropriate. “Alternates” may not be designated to act on behalf of Members, although Members may act on behalf of other Members, if requested (e.g., proxy votes).

Decision Rules and Recommendations

The advice from the SRG will be submitted in writing by the SRG Chair to the Assistant Administrator for Fisheries, providing a copy to Director of the relevant NMFS Fisheries Science Center, the relevant NMFS Regional Administrator, the SRG Liaison, and the National SRG Coordinator within three months of the annual meeting. Minor comments on the SARs or other documents being reviewed at the SRG meeting may be sent directly to the SRG Liaison. Should the SRG have recommendations for the FWS, they are to be submitted in writing from the SRG Chair to the appropriate FWS Regional Director, providing a copy to the NMFS Liaison, the FWS National Marine Mammal Coordinator, and the National SRG Coordinator. The SRG will seek to reach consensus on scientific or technical advice provided to NMFS or the FWS. If needed, the SRG Chair may call for a majority vote. Recommendations from the SRGs to the agencies should be from SRG members collectively, and not from meeting Observers or Invited Experts. If one or more SRG Members do not agree with the proposed recommendations, minority opinions will be summarized in the meeting minutes. If the vote occurs during a closed session then the minutes will be appended to reflect minority opinions. The Assistant Administrator for Fisheries (or his/her designee) should provide a written response to the SRG’s recommendations within three months.

b) Minutes

The SRG Liaison intends to circulate draft minutes of each meeting to the SRG to review for accuracy within two months of the SRG meeting. The SRG Members will provide their comments promptly. The final SRG meeting minutes will be made available to the public on the following website <https://www.fisheries.noaa.gov/national/marine-mammal-protection/scientific-review-groups>

c) Communication Between Meetings

In some cases, NMFS may need to consult with the SRG between meetings. When this occurs, the SRG Liaison will work with the Chair to circulate information, provide deadlines for feedback, and address any questions of SRG Members regarding the scope and nature of the review. SRG Members may correspond with other Members regarding the review but are asked to send any correspondences or documents intended for the full SRG via the SRG Chair or SRG Liaison to ensure proper distribution. A summary of discussions and

recommendations resulting from inter-sessional SRG meetings will be captured in meeting minutes and made available to the public on the following website:
<https://www.fisheries.noaa.gov/national/marine-mammal-protection/scientific-review-groups>

6) Compensation and Budget

Pursuant to section 117(d)(3) of the MMPA, Members of the SRG shall serve without compensation but may be reimbursed by NMFS, upon request, for reasonable travel costs and other pre-approved expenses. The Chair may not commit the expenditure of government funds and will consult with the NMFS Liaison in advance regarding matters that require financial support of the SRG.

7) Review and Application

These Terms of Reference shall be reviewed two years after adoption, and then every five years thereafter by NMFS and the three SRG Chairs and in consultation with their SRG members, and by the FWS, as appropriate. Any amendments to these Terms of Reference shall be made by the Assistant Administrator for Fisheries in consultation with the three SRG Chairs, the SRG Liaisons, the National SRG Coordinator, the Director of the NMFS Office of Science and Technology, the Director of the NMFS Office of Protected Resources, the Assistant Director for Ecological Services at the FWS, and the Marine Mammal Commission. Once any revisions are approved, the revised Terms of Reference will be circulated to all SRG Members promptly.

NMFS, in consultation with each SRG Chair, will initiate implementation of the provisions of these Terms of Reference within three months of the first SRG meeting subsequent to the finalization of this document and will fully implement all the provisions within three calendar years.

Appendix A. Expectations Regarding Information and Review

Section 117 of the MMPA requires that NMFS and the FWS develop SARs for all marine mammal stocks that occur in waters under U.S. jurisdiction. The SARs are based upon the best scientific information available. The MMPA requires SARs to include, among other things, a calculation of Potential Biological Removal (PBR) and an assessment of whether incidental fishery takes are “insignificant and approaching zero mortality and serious injury rate.” These reports are to be reviewed at least annually for “strategic stocks” and for stocks for which new information is available, and at least once every three years for all other stocks.

The SRGs are independent expert advisory groups external to NMFS and FWS, and their members provide thorough, rigorous review of the SARs and other information related to the matters identified in Section 117(d) of the MMPA.

SAR Policies and Procedures: Guidelines for Assessing Marine Mammal Stocks (GAMMS)

Although the MMPA provides some general guidelines for developing the SARs, more detailed guidelines were developed and applied in drafting the original SARs. Final guidelines were completed in 1995 (Barlow et al. 1995), and revised in 1997 (Guidelines for Assessing Marine Mammal Stocks (GAMMS), Wade and Angliss 1997) and again in 2005 (Revisions to Guidelines for Assessing Marine Mammal Stocks (GAMMS, GAMMS II), NMFS 2005). NMFS and FWS identified a need for additional changes and clarifications to the GAMMS II. In 2011, NMFS and FWS convened a workshop (GAMMS III) that resulted in proposed revisions to the guidelines. NMFS solicited and received public comments on the proposed revisions, and (in consultation with FWS) finalized most of the proposed revisions in 2016.

The intent of the GAMMS is to: (1) provide a uniform framework for the consistent application of section 117 of the amended MMPA, (2) ensure that PBR is calculated in a manner that meets the goals of the MMPA, (3) provide guidelines for evaluating whether fishery takes are insignificant and approaching a zero mortality and serious injury rate, and (4) provide a clear and transparent decision-making process.¹

*Distinguishing Serious from Non-serious Injury in Marine Mammals*²

In 2012, NMFS finalized its policy for distinguishing serious from non-serious injury in marine mammals. The objectives of the policy are to provide a systematic process for those making serious injury determinations and, thus, to promote a consistent and transparent process for distinguishing serious from non-serious injuries. The policy specifies the annual process for

¹ [NMFS 02-204-01 Guidelines for Preparing Stock Assessment Reports Pursuant to the 1994 Amendments to the MMPA](#)

² [NMFS 02-238-01 Process for Distinguishing Serious from Non-Serious Injury of Marine Mammals](#)

making and documenting injury determinations, and was first applied to the 2013 SARs based on the most recent 5-year period for which data are available, and was revised and updated in 2014³. In addition to the draft SARs, the SRGs will review the annual injury determination reports, which inform the SARs.

Reviewing and Designating Stocks and Issuing Stock Assessment Reports

In 2019, NMFS finalized a procedure⁴ related to reviewing and designating stocks and issuing stock assessment reports to improve consistency and transparency in marine mammal stock designations, and to ensure that stocks can be effectively managed. The procedure establishes a process for prioritizing stocks that should be considered for stock designation revisions, clarifies science and management roles in designating marine mammal stocks, emphasizes the definition of a stock as a management unit, provides questions to consider when determining whether multiple demographically independent populations may be combined into one or more stocks for management purposes, and details the process by which stock designations are made and documented. As detailed further in the directive, the SRG plays a role in reviewing and advising NMFS as it relates to stock designations.

SRG Review of the SARs and Documents Pertinent to Marine Mammal Stock Assessment

The 1994 amendments to the MMPA adopted an approach to authorizing the taking of marine mammals incidental to commercial fisheries that was designed to allow marine mammal stock assessments using the best available scientific data and allow management decisions in the face of uncertainty. The PBR approach was designed to allow NMFS and FWS to establish take thresholds that, if met, would allow marine mammal stocks to increase to or remain at optimum sustainable population levels and identify stocks that may have management concerns; thereby allowing the agencies to prioritize resources on those stocks that have the most need for additional research or conservation actions. As such, SRGs will review the data and assessments within this PBR approach framework.

SRG Duties

Section 117(d)(1) of the MMPA, specifies that the SRGs shall advise the Secretary (of DOC and the DOI depending on the marine mammal species) on:

- (A) Population estimates and the population status and trends of marine mammal stocks;
- (B) Uncertainties and research needed regarding stock separation, abundance, or trends, and factors affecting the distribution, size, or productivity of the stock;
- (C) Uncertainties and research needed regarding the species, number, ages, gender,

³ [NMFS 02-238-01 Process for Distinguishing Serious from Non-Serious Injury of Marine Mammals](#)

⁴ [NMFS 02-204-03 Reviewing and Designating Stocks and Issuing Stock Assessment Reports under the Marine Mammal Protection Act](#)

- and reproductive status of marine mammals;
- (D) Research needed to identify modifications in fishing gear and practices likely to reduce the incidental mortality and serious injury of marine mammals in commercial fishing operations;
- (E) The actual, expected, or potential impacts of habitat destruction, including marine pollution and natural environmental change, on specific marine mammal species or stocks, and for strategic stocks, appropriate conservation or management measures to alleviate any such impacts; and
- (F) Any other issue which the Secretary or the groups consider appropriate.

In reviewing the SARs, the SRG Members are expected to focus their reviews on the technical aspects of the assessments and to consider at least the following (this list is not exhaustive but rather highlights the most important considerations):

- Adequacy and quality of methods used to estimate population abundance and trends (age of data/model, spatial extent, survey frequency, statistical methods, proper consideration of caveats, biological and statistical assumptions, and uncertainties);
- Adequacy and quality of methods used to assess human-caused mortality and serious injury of marine mammals (following, for NMFS, the Serious Injury Determination Policy adopted by NMFS in 2012, and incorporating other studies, as appropriate);
- Adequacy and quality of methods used to evaluate stock structure, and whether uncertainties have been appropriately considered;
- Whether the most complete and best available scientific information was included in the stock assessment reports;
- Whether the MMPA and, if applicable, GAMMS are appropriately applied within each stock assessment report (e.g., are recovery factors (F_r) set appropriately?);
- Whether there are significant data gaps in the completeness or accuracy of stock assessments as required by the MMPA (e.g., whether there is “cryptic” human-caused mortality and serious injury, such as unobserved ship strikes of large whales, whether observer coverage is adequate, unobserved impacts from exposure to contaminants or noise, etc.);
- Whether there are new or novel techniques/approaches that may improve stock assessments in the future;
- Whether there are issues, concerns, and possible impacts to subsistence resources or harvesting;
- Whether there are issues with respect to the loss or modification of the stock’s habitat;
- Whether the information presented in the SARs directly pertains to stock assessment and satisfies the requirements of the MMPA and, if applicable, GAMMS;
- Adequacy, quality, and thoroughness of an assessment’s consideration of historical,

current and anticipated anthropogenic and natural impacts cumulatively, as well as the conservation/management measures taken or considered to alleviate any such impacts;

- Assurance that all data and information supporting an individual stock assessment meets the appropriate peer review requirements;⁵
- Assurance that all literature supporting an individual stock assessment meets NMFS standards for Fundamental Research Communications as established under DAO 219-1 Public Communications and NAO 202-7350D Scientific Integrity.⁶

In order to complete its reviews, the membership of each SRG maintains expertise in the following areas: marine mammal ecology, life history, genetics, population dynamics, anthropogenic impacts, physiology, sensory biology, and general biology, as well as commercial fishing gear and operations, resource management, and biological modeling. Ideally, each Member should have expertise in more than one topic as the species and scientific issues discussed in SRG meetings are diverse.

Information provided to the SRGs

The marine mammal SARs are to be based on the best available scientific information. NMFS and the FWS strive to use peer-reviewed data and methods as the basis for SARs. However, in many cases, the best scientific information available may not have been published or subjected to professional journal peer review, as this process can take months or years to complete. In other cases, data pertinent to assessments of stocks are routinely collected and analyzed but are not suitable for a stand-alone external peer-reviewed publication. Therefore, NMFS often relies on science that has been cleared through the NMFS' review process for Fundamental Research Communications and/or has been subjected to other external expert review to ensure that information is not only high quality but is available for management decisions in a timely fashion. In these cases, all data used by NOAA scientists in stock assessments should meet the standards established by NOAA under its implementation of the IQA, and all NOAA authored literature should meet the standards for Fundamental Research Communications⁷ established by the NOAA Research Council and by NMFS. In the same sense, the FWS often relies on information provided by the U.S. Geological Survey and other external partners to provide pertinent data that may be unpublished but constitutes the best available scientific information. NMFS and the FWS may rely on the SRGs to provide independent expert reviews of particular components of new science to be incorporated into the SARs to ensure that these components constitute the best available scientific information. Likewise, upon SRG review of these components and the draft SARs themselves, NMFS considers the SRG review of the draft

⁵ https://www.cio.noaa.gov/services_programs/IQ_Guidelines_103014.html

⁶ http://www.corporateservices.noaa.gov/ames/administrative_orders/chapter_202/202-735-D.html

⁷ http://www.osec.doc.gov/opog/dmp/daos/dao219_1.html

SARs to constitute peer review and to meet the requirements of the Office of Management and Budget (OMB) Peer Review Bulletin and the IQA⁸.

The use of unpublished reports and data within SARs is strongly discouraged, as such materials do not meet NOAA standards for IQA or for Fundamental Research Communications. The SRG shall have access to or be provided with (on request) all references cited in the reports.

NMFS and the FWS, as appropriate, will provide draft SARs, data, background documents, and other documents to be reviewed to the SRG in advance of their annual meetings in accordance with these terms of reference.

In some cases, NMFS may need to consult with the SRGs between meetings. When this occurs, the SRG Liaison will work with the Chair to circulate information, provide deadlines for feedback, and address any questions from SRG Members regarding the scope and nature of the review.

⁸ https://www.cio.noaa.gov/services_programs/info_quality.html

References

Barlow J, Swartz SL, Eagle TC, Wade PR. 1995. U.S. Marine Mammal Stock Assessments: Guidelines for Preparation, Background, and a Summary of the 1995 Assessments. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-OPR-6, 73 pp.

Wade PR, Angliss RP. 1997. Guidelines for Assessing Marine Mammal Stocks: Report of the GAMMS Workshop, April 3-5, 1996, Seattle, WA. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-OPS-12, 93 pp.

Appendix B. Minimum Selection Criteria for Appointing Members to the SRGs

The SRGs are composed of Members with multi-disciplinary scientific expertise with marine mammals of the SRG region; the group as a whole should have a balanced representation of viewpoints (i.e., scientific and technical viewpoints). When appointing new SRG Members, or reappointing current SRG members, in addition to the Member's contribution during previous meetings, NMFS will consider the following criteria:

- 1) Ability to make time available for the purposes of the SRG,
- 2) Knowledge of species (or closely related species) of marine mammals in the SRG's region,
- 3) Scientific or technical achievement in a relevant discipline, which may include ecology, life history, fishing technology and practices, biology, genetics, resource management, or biological modeling, to be considered an expert peer reviewer for the topic,
- 4) Demonstrated experience working effectively on teams,
- 5) Expertise relevant to current and expected needs of the SRG, in particular, expertise required to provide adequate review and knowledgeable feedback on current or developing stock assessment issues, techniques, etc. In practice, this means that each Member should have expertise in more than one topic as the species and scientific issues discussed in SRG meetings are diverse,
- 6) No conflict of interest with respect to their duties as a member of the SRG, and
- 7) Retired or former FWS, USGS, or NOAA employees, can be considered for the SRG following a minimum one-year hiatus from employment with the agency.

Although the MMPA does not explicitly prohibit federal employees from serving as SRG Members, NMFS interprets section 117(d)'s reference to the SRGs as "independent" bodies that are exempt from FACA requirements to indicate that SRGs are intended to augment existing federal expertise and are not composed of federal employees or contractors.